



LFX™ Series – Liquid Filtration Excellence Engineered for Results

LFX-OAB™ – Oil Absorbent Filter Bags Technical Overview

Filtracore Asia's **LFX-OAB™ Oil Absorbent Filter Bags** are engineered for the removal of **free and dispersed (non-emulsified)** hydrocarbons, oils and greases from process and wastewater streams. Oil removal is achieved via adsorption onto polypropylene microfibre media while a depth-filtration felt matrix maintains reliable particulate retention – delivering dual-function performance in a single element.

Available in nominal **felt support-layer ratings of 10–100 µm** (*finer by special order; coarser on request*), LFX-OAB™ supports both polishing and bulk capture in oil-laden streams. **MLPP** variants add staged adsorption layers and an outer spunbond cover to stabilise ΔP and resist premature blinding; **optional absorption inserts** for Size #02 further increase hydrocarbon capacity for long runs.



In practice, OAB components provide broad chemical compatibility (**polypropylene generally suitable pH 1–14 in non-oxidising aqueous service**), **operating temperature up to 90 °C**, **recommended change-out ΔP 0.7–1.0 bar**, and typical clean-water sizing of **~0.5–1.0 m³/h (Size #01)** and **~1.0–2.5 m³/h (Size #02)**. **Housing clean-water capacities are often higher (~20 m³/h for #01; ~40 m³/h for #02)** but should **not** be used as continuous operating set-points for oil-absorbent media.

LFX-OAB™ drops into **standard Size #01 and #02 housings** and suits industrial wastewater, marine discharge polishing, metalworking fluid recovery and petrochemical process water. **For streams with stable emulsions or high surfactant content, upstream coalescence/separation is recommended** to achieve consistent oil removal; upstream magnetic capture of ferrous fines can further extend service life.

Built for Absorption. Designed for Reliability. Proven in the Field.

Technical Specifications

- **Material:**
Polypropylene microfibre absorbent layers integrated with a polypropylene depth-filtration felt matrix; optional Multilayer Polypropylene (MLPP) with gradient-density layers and spunbond cover; optional absorption inserts for Size #02 bags to increase hydrocarbon capacity.
- **Micron ratings:**
Nominal support-layer ratings **10–100 µm** (common grades: 10, 25, 50 µm); finer (≤ 10 µm) by special order; coarser on request. *Micron rating applies to the felt particulate layer; oil-absorption performance is independent of micron size.*
- **Weight (felt media):**
Typically 350–500 gsm (single-layer), 600–900 gsm (multilayer).
- **Operating temperature limits:**
Polypropylene up to **90 °C** continuous; short-term excursions to **100 °C** may be permissible depending on chemistry.
- **pH range:**
Polypropylene components generally suitable **pH 1–14** in **non-oxidising** aqueous service (verify elastomers/adhesives/ring metals against the process).
- **Recommended flow rates (reference conditions):**
Size #01: **0.5–1.0 m³/h** | Size #02: **1.0–2.5 m³/h** (*clean water at 20 °C, ~1 mPa·s; new bag; application-dependent*).
- **Housing flow capacity (informative):**
Housing clean-water capacities are vessel-specific; consult the OEM. (*Typical single-bag envelopes ≈20 m³/h for Size #01 and ≈40 m³/h for Size #02; not continuous operating set-points for oil-absorbent media*).
- **Initial differential pressure:**
≤ **0.07 bar** across the bag at the above reference conditions.
- **Change-out differential pressure:**
0.7–1.0 bar recommended to avoid bypass or rupture.
- **Construction:**
Fully welded seams and welded flat-disc bottom (standard); sewn seams available on request for legacy housings.
- **Top options:**
Steel snap-ring (galvanised steel or 304/316 stainless steel), plastic flange/collar (PP/PET), or sewn cuff to match OEM housing designs.
- **Surface treatments:**
Silicone-free construction standard; optional treatments on the **outer felt cover** for enhanced dirt-holding (not applied to the absorbent layer).
- **Accessories:**
Upstream magnetic separator inserts (**ACCSX™**) available where ferrous particulates accompany hydrocarbon contamination.



Recommended vs. Maximum Flow Rates (Oil Absorbent Service)

Size Code	Recommended Flow Rates ¹ (m ³ /h)	Maximum Housing Capacity ² (m ³ /h)
Size 01	0.50 to 1.0	14
Size 02	1.0 to 2.5	23

Nominal Dimensions & Effective Filter Area

Size Code	Nominal Dimensions (mm/inches)		Effective Filter Area (m ²)
Size 01	ø 180 x 430	ø 7 x 17	0.24–0.26
Size 02	ø 180 x 810	ø 7 x 32	0.47–0.49

¹ Recommended flow rates are based on water-like fluids at ambient temperature and are required to achieve effective hydrocarbon uptake. Operating within these limits ensures sufficient contact time between the absorbent media and contaminated stream.

² Maximum housing flow rates are listed for comparison to industry-standard filter bag housings. At these flows, oil adsorption efficiency drops significantly, and the bag will function primarily as a coarse particulate filter.

For optimal performance and service life, FiltraCore Asia strongly advises designing to recommended adsorption flow ranges rather than maximum housing capacities. Actual performance depends on fluid viscosity, contaminant load, pressure differential, and system configuration. Operating above recommended flow may shorten filter life or reduce filtration efficiency.

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